

**PART NUMBER:**  
VCQM2000-PB

**NVIDIA Quadro M2000 by PNY**  
REAL INTERACTIVE EXPRESSION

The Perfect Balance of Superb Performance, Compelling Features, and Compact Form Factor. The Quadro M2000 delivers incredible creative experiences across a broad range of professional 3D applications.



This advanced graphics card features an NVIDIA Maxwell™- based GPU, plus 4 GB of ultra-fast on-board memory and the power to drive four 4K displays natively. This makes it an excellent choice for accelerating product development and content creation workflows that demand fluid interactivity with complex models and scenes. Creative professionals can tap into this increased performance—as well as hardware HEVC encode and decode engines—to accelerate both creation and playback of HEVC content.

NVIDIA Quadro is the world’s most advanced visual computing platform for workstations. Much more than a powerful graphics accelerator for sophisticated applications used by professionals, NVIDIA Quadro enables you to create and collaborate in exciting new ways. This makes it the #1 solution for designing, visualizing, and simulating your ideas.

NVIDIA Quadro by PNY GPUs are designed, built, and tested by NVIDIA specifically for professional workstations powering more than 150 professional applications across a broad range of industries, including manufacturing, media and entertainment, sciences, and energy.

**QUADRO M2000 - PRODUCT SPECIFICATIONS**

GPU MEMORY	4 GB GDDR5
MEMORY INTERFACE	128-bit <sup>1</sup>
MEMORY BANDWIDTH	106 GB/s
GPU PROCESSING CORES	768
SYSTEM INTERFACE	PCI Express 3.0 x16
MAX POWER CONSUMPTION	75 W
THERMAL SOLUTION	Ultra-quiet Active Fansink
FORM FACTOR	110 mm (H) x 167 mm (L) Single Slot, Full Height
DISPLAY CONNECTORS	4 x DP 1.2
MAX SIMULTANEOUS DISPLAYS	4 direct, 4 DP 1.2 Multi-Stream
MAX DP 1.2 RESOLUTION	4096 x 2160 @ 60 Hz
MAX DVI SL RESOLUTION <sup>2</sup>	1920 x1200 @ 60 Hz
GRAPHICS APIS	Shader Model 5.0, OpenGL 4.5, DirectX 12 <sup>3</sup>
COMPUTE APIS	CUDA, DirectCompute, OpenCL
PACKAGE CONTENT	4 x DP to DVI (SL) adapter P/N: QSP-DP0VISL
WEIGHT	239g
PART NUMBER	VCQM2000-PB
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<sup>1</sup> The 128-bit memory system utilizes Maxwell’s segmented memory capability

<sup>2</sup> Via supplied adapter/connector/bracket

<sup>3</sup> GPU supports DX 12 API Hardware Feature Level 12\_1

## Quadro M2000 - TECHNICAL SPECIFICATIONS AND FEATURES

<b>HIGH PERFORMANCE IN A SINGLE-SLOT FORM FACTOR</b>	Tackle your most demanding visualization workloads with ease using the advanced NVIDIA Maxwell™ GPU architecture and the flexibility of a single-slot form factor.
<b>EXTREME DISPLAY DENSITY AT 4K AND BEYOND</b>	A new display engine drives up to four 4K resolution displays natively (4096x2160 @ 60 Hz with 30-bit color).
<b>4 GB ULTRA-FAST MEMORY</b>	Large GPU memory with fast bandwidth enables the creation and rendering of large, complex models and the computation of massive datasets.

### QUADRO M2000 - FEATURES

- DisplayPort 1.2
- DisplayPort with Audio
- Professional 3D Support
- NVIDIA 3D Vision™ Pro
- Quadro Sync Compatibility
- NVIDIA GPUDirect™ Support
- NVIDIA nView® Desktop Management Software Compatibility
- Stereo Connector
- HDCP Support
- NVIDIA Mosaic Mode
- Energy Star Enabling

### QUADRO M2000 - TECHNICAL SPECIFICATIONS

#### SUPPORTED PLATFORMS

- Microsoft Windows 10 (64-bit and 32-bit)
- Microsoft Windows 8 & 8.1 (64-bit and 32-bit)
- Microsoft Windows 7 (64-bit and 32-bit)
- Linux® - Full OpenGL implementation, complete with NVIDIA and ARB extensions (64-bit and 32-bit)

#### 3D GRAPHICS ARCHITECTURE

- Scalable geometry architecture
- Hardware tessellation engine
- NVIDIA® GigaThread™ engine with dual copy engines
- Shader Model 5.0 (OpenGL 4.5 and DirectX 12)
- Up to 16K x16K texture and render processing
- Transparent multisampling and super sampling
- 16x angle independent anisotropic filtering
- 32-bit per-component floating point texture filtering and blending
- 64x full scene antialiasing (FSAA)/128x FSAA in SLI Mode
- Decode acceleration for MPEG-2, MPEG-4 Part 2 Advanced Simple Profile, H.264, MVC, VC1, DivX (version 3.11 and later), and Flash (10.1 and later)
- Dedicated H.264 Encoder
- Blu-ray dual-stream hardware acceleration (supporting HD picture-in-picture playback)
- Quadro Boost (Automatically adjusts GPU engine throughput to maximize application performance.)

#### PARALLEL COMPUTING CAPABILITIES

- SMM Architecture (Maxwell streaming multi-processor design that delivers greater processing and efficiency)
- Dynamic Parallelism (GPU dynamically spawns new threads without going back to the CPU)

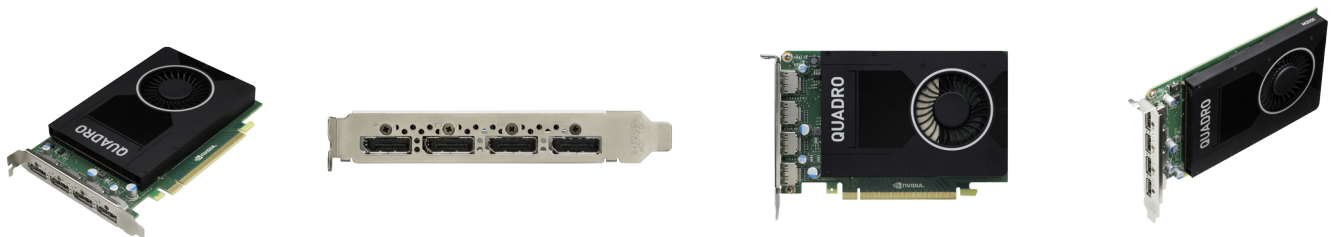
- API support includes: CUDA C, CUDA C++, DirectCompute 5.0, OpenCL, Java, Python, and Fortran
- 96 KB of RAM (dedicated shared memory per SM)

#### ADVANCED DISPLAY FEATURES

- Simultaneously drive up to four displays when connected natively
- Four DisplayPort 1.2 (supporting resolutions such as 4096x2160 @60 Hz)
- DisplayPort to VGA, DisplayPort to DVI (single-link and dual-link) and DisplayPort to HDMI cables (resolution support based on dongle specifications)
- HDCP support over DisplayPort, DVI and HDMI connectors
- 12-bit internal display pipeline (hardware support for 12 on supported panels, applications and connection)
- NVIDIA 3D Vision™ technology, 3D DLP, interleaved, and other 3D stereo format support
- Full OpenGL quad buffered stereo support
- Underscan/overscan compensation and hardware scaling
- NVIDIA® nView® multi-display technology
- Support for NVIDIA Quadro, NVIDIA Enterprise Management Tools

#### DISPLAY PORT AND HDMI DIGITAL AUDIO

- Support for the following audio modes: Dolby Digital (AC3), DTS 5.1, Multichannel (7.1) LPCM, Dolby Digital Plus (DD+), and MPEG-2/MPEG-4 AAC
- Data rates of 44.1 KHz, 48 KHz, 88.2 KHz, 96 KHz, 176 KHz, and 192 KHz
- Word sizes of 16 bits, 20 bits, and 24 bits



#### PACKAGE CONTENT:

- 4 x DP to DVI (SL) adapter
- Drivers + Installation Guide

P/N: GSP-DPDPVISL

